

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A communication apparatus for communicating with a server apparatus based on a server certificate ~~that indicates validity of said server apparatus, the~~ communication apparatus comprising:

a revocation number obtainment unit operable to obtain a revocation number from a repository apparatus storing ~~said the~~ the revocation number, the revocation number being that is information serving as a criterion for judging validity of the server certificate;

a revocation number storage unit operable to store the ~~obtained~~ obtained by the revocation number obtainment unit;

an identification number reading unit operable to read ~~out,~~ from the server certificate, an identification number that identifies the used to identify said server certificate;

a certificate judgment unit operable to judge the validity of the server certificate by comparing the ~~read-out~~ identification number that identifies the server certificate with the revocation number stored by the revocation number storage unit; and

a communication control unit operable to establish a communication with the server apparatus when the certificate judgment unit judges the server certificate ~~is judged~~ to be valid, and operable ~~not to revoke~~ to establish a communication with the server apparatus when the certificate judgment unit judges the server certificate ~~is judged not to be valid, invalid~~

wherein the certificate judgment unit (i) judges whether or not the identification number that identifies the server certificate is smaller than the revocation number stored by the revocation number storage unit, (ii) judges that the server certificate is not valid when the identification number that identifies the server certificate is judged to be smaller than the

revocation number stored by the revocation number storage unit, and (iii) judges that the server certificate is valid when the identification number that identifies the server certificate is judged to be equal to or larger than the revocation number stored by the revocation number storage unit.

Claim 2 (Cancelled)

Claim 3 (Currently Amended) The communication apparatus according to Claim 1, further comprising a revocation number judgment unit operable to judge validity of the revocation number stored by the revocation number storage unit,

wherein the certificate judgment unit judges the validity of the server certificate ~~by use of the revocation number,~~ when the revocation number judgment unit judges that the revocation number stored by the revocation number storage unit is valid.

Claim 4 (Currently Amended) The communication apparatus according to Claim 3, wherein the revocation number judgment unit judges the validity of the revocation number stored by the revocation number storage unit by comparing an identification number of a repository certificate indicating validity of the repository apparatus with the revocation number stored by the revocation number storage unit.

Claim 5 (Currently Amended) The communication apparatus according to Claim 4, wherein the revocation number judgment unit judges that the repository apparatus is valid[[,]] when the identification number of the repository certificate is equal to or larger than the

revocation number stored by the revocation number storage unit.

Claim 6 (Currently Amended) The communication apparatus according to Claim 3, wherein the revocation number judgment unit judges the validity of the revocation number obtained by the revocation number obtainment unit by comparing ~~said~~ the revocation number obtained by the revocation number obtainment unit with the revocation number stored by the revocation number storage unit.

Claim 7 (Currently Amended) The communication apparatus according to Claim 6, wherein the revocation number judgment unit judges that the revocation number obtained by the revocation number obtainment unit is valid[[,]] when ~~said~~ obtained the revocation number obtained by the revocation number obtainment unit is equal to or larger than the revocation number stored by the revocation number storage unit.

Claim 8 (Currently Amended) A certificate issuing apparatus for issuing a server certificate indicating validity of a server apparatus, the certificate issuing apparatus comprising:
a revocation number storage unit operable to store a revocation number, the revocation number being that is information serving as a criterion for judging validity of the server certificate;

a revocation number update unit operable to update the revocation number stored by the revocation number storage unit to a number that is larger than an identification number of a server certificate to be revoked, the revocation number update unit updating the revocation

number when being notified of the identification number of the server certificate to be revoked;
and

an issuing unit operable to issue a new server certificate including an identification number indicating a value that is equal to or larger than the revocation number stored by the revocation number storage unit,

wherein, when the revocation number update unit updates the revocation number, the issuing unit issues the new server certificate to another server apparatus that corresponds to a server certificate including an identification number indicating a value that is smaller than the updated revocation number that includes an identification number indicating a value which is equal to or larger than the revocation number stored by the revocation number storage unit.

Claim 9 (Cancelled)

Claim 10 (Cancelled)

Claim 11 (Currently Amended) The certificate issuing apparatus according to Claim 8, further comprising ~~a~~ an expiration date revocation number update unit operable to specify an identification number of a server certificate, specify an approaching expiration date of which is approaching, and update the revocation number stored by the revocation number storage unit to a number that is larger than said the specified identification number of the server certificate.

Claim 12 (Currently Amended) The certificate issuing apparatus according to Claim 11,

wherein, when the expiration date revocation number update unit updates the revocation number stored by the revocation number storage unit, the issuing unit issues the new server certificate to
for a server apparatus with a server certificate that is assigned an identification number that is
smaller than the updated revocation number updated by the expiration date revocation number
update unit, in the case where the revocation number update unit updates the revocation number
stored by the revocation number storage unit.

Claim 13 (Currently Amended) A communication system comprising;

a server apparatus[.];

a certificate issuing apparatus for issuing a server certificate indicating validity of the
server apparatus[.]; and

a communication apparatus for communicating with the server apparatus based on ~~said~~
the server certificate,

wherein the certificate issuing apparatus includes:

_____ a first revocation number storage unit operable to store a revocation number, the
revocation number being that is information serving as a criterion for judging validity of the
server certificate;

a revocation number update unit operable to update the revocation number stored
by the first revocation number storage unit to a number that is larger than an identification
number of a server certificate to be revoked, the revocation number update unit updating the
revocation number when being notified of the identification number of the server certificate to be
revoked; and

_____ an issuing unit operable to issue a new server certificate including an identification number indicating a value that is equal to or larger than the revocation number stored by the first revocation number storage unit,

wherein, when the revocation number update unit updates the revocation number, the issuing unit issues the new server certificate to another server apparatus that corresponds to a server certificate including an identification number indicating a value that is smaller than the updated revocation number ~~that includes an identification number indicating a value which is equal to or larger than the revocation number stored by the first revocation number storage unit,~~ and,

wherein the communication apparatus includes:

a revocation number obtainment unit operable to obtain a revocation number from a repository apparatus ~~storing said the revocation number, the revocation number being that is information serving as a criterion for judging the validity of the server certificate;~~

_____ a second revocation number storage unit operable to store the ~~obtained~~ revocation number obtained by the revocation number obtainment unit;

_____ an identification number reading unit operable to ~~read-out,~~ from the server certificate, an identification number that identifies the used to identify said server certificate;

_____ a certificate judgment unit operable to judge the validity of the server certificate by comparing the ~~read-out~~ identification number that identifies the server certificate with the revocation number stored by the second revocation number storage unit; and

_____ a communication control unit operable to establish a communication with the server apparatus when the certificate judgment unit judges the server certificate ~~is judged to be~~

~~valid, and operable not to establish~~ revoke a communication with the server apparatus when ~~the~~
~~certificate judgment unit judges~~ the server certificate is ~~judged not to be valid~~ invalid, and
wherein the certificate judgment unit (i) judges whether or not the identification number
that identifies the server certificate is smaller than the revocation number stored by the second
revocation number storage unit, (ii) judges that the server certificate is not valid when the
identification number that identifies the server certificate is judged to be smaller than the
revocation number stored by the second revocation number storage unit, and (iii) judges that the
server certificate is valid when the identification number that identifies the server certificate is
judged to be equal to or larger than the revocation number stored by the second revocation
number storage unit.

Claim 14 (Currently Amended) A communication method ~~of communicating for carrying~~
~~out a communication~~ with a server apparatus based on a server certificate ~~indicating validity of~~
~~said server apparatus~~, the communication method comprising:

~~a revocation number obtainment step of obtaining a revocation number from a repository~~
~~apparatus storing said~~ the revocation number, ~~the revocation number being that is information~~
~~serving as a criterion for judging validity of the server certificate;~~

~~a revocation number storage step of storing the obtained revocation number~~ obtained by
the obtaining of the revocation number into a recording unit;

~~an identification number reading step of reading out, from the server certificate, an~~
~~identification number that identifies the~~ used to identify said server certificate;

~~a certificate judgment step of judging the validity of the server certificate by comparing~~

~~the read-out identification number read by the reading of the identification number~~ with the revocation number stored by the recording unit; and

~~a communication control step of establishing a communication with the server apparatus when the judging of the validity of the server certificate judges that the server certificate is judged to be valid, and revoking of not establishing a communication with the server apparatus when the judging of the validity of the server certificate judges that the server certificate is judged to be invalid~~ not valid.

wherein the judging of the validity of the server certificate judges whether or not the identification number that identifies the server certificate is smaller than the revocation number stored in the recording unit, judges that the server certificate is not valid when the identification number that identifies the server certificate is judged to be smaller than the revocation number stored in the recording unit, and judges that the server certificate is valid when the identification number that identifies the server certificate is judged to be equal to or larger than the revocation number stored in the recording unit.

Claim 15 (Currently Amended) A certificate issuing method ~~of for~~ issuing a server certificate indicating validity of a server apparatus, the certificate issuing method comprising:

~~a revocation number storage step of storing, into a recording unit, a revocation number, the revocation number being that is information serving as a criterion for judging validity of the server certificate;~~

updating the revocation number stored by the storing of the revocation number to a number that is larger than an identification number of a server certificate to be revoked, the

updating of the revocation number being performed upon being notified of the identification number of the server certificate to be revoked; and

an issuing step of issuing a new server certificate including an identification number indicating a value that is equal to or larger than the revocation number stored by the storing of the revocation number,

wherein, when the updating of the revocation number updates the revocation number, in the issuing step, the new server certificate that includes an identification number is issued to another server apparatus that corresponds to a server certificate including an identification number indicating a value that is smaller than the updated revocation number, the identification number indicating a value which is equal to or larger than the revocation number stored by the recording unit.

Claim 16 (Currently Amended) A computer-readable recording medium having a program recorded thereon, the program for communicating a communication apparatus that communicates with a server apparatus based on a server certificate indicating validity of said server apparatus, the program causing a computer to execute a method comprising the following steps:

a revocation number obtaining step of obtaining a revocation number from a repository apparatus storing said the revocation number, the revocation number being that is information serving as a criterion for judging validity of the server certificate;

a revocation number storage step of storing the obtained revocation number obtained by the obtaining of the revocation number into a recording unit;

~~an identification number reading step of reading out~~, from the server certificate, an identification number that identifies the used to identify said server certificate;

~~a certificate judgment step of judging~~ the validity of the server certificate by comparing the ~~read-out~~ identification number read by the reading of the identification number with the revocation number stored by the recording unit; and

~~a communication control step of establishing~~ a communication with the server apparatus when the judging of the validity of the server certificate judges that the server certificate is ~~judged to be valid~~, and ~~revoking of not establishing~~ a communication with the server apparatus when the judging of the validity of the server certificate judges that the server certificate is ~~judged to be invalid~~ not valid.

wherein the judging of the validity of the server certificate judges whether or not the identification number that identifies the server certificate is smaller than the revocation number stored in the recording unit, judges that the server certificate is not valid when the identification number that identifies the server certificate is judged to be smaller than the revocation number stored in the recording unit, and judges that the server certificate is valid when the identification number that identifies the server certificate is judged to be equal to or larger than the revocation number stored in the recording unit.

Claim 17 (Currently Amended) A computer-readable recording medium having a program recorded thereon, the program for issuing a certificate issuing apparatus that issues a server certificate indicating validity of a server apparatus, the program causing a computer to execute a method comprising the following steps:

~~a revocation number storage step of storing, into a recording unit, a revocation number,~~
~~the revocation number being that is information serving as a criterion for judging validity of the~~
server certificate;

~~updating the revocation number stored by the storing of the revocation number to a~~
~~number that is larger than an identification number of a server certificate to be revoked, the~~
~~updating of the revocation number being performed upon being notified of the identification~~
~~number of the server certificate to be revoked; and~~

~~an issuing step of issuing a new server certificate including an identification number~~
~~indicating a value that is equal to or larger than the revocation number stored by the storing of~~
~~the revocation number,~~

~~wherein, when the updating of the revocation number updates the revocation number, in~~
~~the issuing step, the new server certificate that includes an identification number is issued to~~
~~another server apparatus that corresponds to a server certificate including an identification~~
~~number indicating a value that is smaller than the updated revocation number, the identification~~
~~number indicating a value which is equal to or larger than the revocation number stored by the~~
recording unit.